

Notice of Allowability

Application No.

09/535,441

Applicant(s)

PANDA, CHINMOY

Examiner

Peter J Smith

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 8/20/2004.
2. ☒ The allowed claim(s) is/are 1-12 and 27-40.
3. ☒ The drawings filed on 23 March 2000 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows: Delete the single character } at the end of the line 3 of claim 27. Claim 27 should appear as follows:

27. (Currently Amended) An apparatus comprising:
 - means for receiving a document comprising text and a plurality of images, each of the plurality of images having a location in the document;[[{ }]]
 - means for extracting one or more document keywords from the document;
 - means for generating a proximity factor for each pair of one of the plurality of images and one of the document keywords, the proximity factor reflecting a degree of correlation between the image and the document keyword of the pair; and
 - means for determining the importance of each of the plurality of images according to an image metric that combines the proximity factors for each document keyword and image pair.

Allowable Subject Matter

2. Claims 1-12 and 27-40 allowed.

3. The following is an examiner's statement of reasons for allowance: The prior art found by the Examiner most closely related to Applicant's claimed invention is Ho et al. (hereinafter "Ho"). There are two functional distinctions between Applicant's invention and the cited prior art of Ho. First, the graphics of Ho are not contained within the document as they are in Applicant's claimed invention. Rather, Ho attempts to supply a user with related graphics from a repository outside of the document so that the graphics can then be incorporated into the document. Second, Ho does not teach determining a degree of correlation between the keyword concepts derived from the text of the document and the images, whereas Applicant's claimed invention creates a proximity factor for each keyword-image pair within the document to determine a degree of correlation between each keyword and each image contained in the document. Ho merely presents all of the images that match to the user without any sort of ranking to determine whether or not one image is more important or more suitable than another image.

Furthermore, the specific utility of each of Ho and Applicant's claimed invention are different. Ho determines keywords in a document expressing concepts and notifies the user when images in a repository matching the concepts expressed by the keywords are available to the user. The user is presented with a set of thumbnails of the matching images and the user may then selected one or more of the images to incorporate into the document. Thus, the goal of Ho is to assist a user with selecting and incorporating images into a document which are related to

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the textual concepts expressed in the document. In contrast, Applicant's claimed invention starts by using a document which contains all of the keywords and the images within the document. After receiving the document, one or more keywords are extracted from the document. Then a proximity factor is generated for each document and keyword pair to reflect the degree of correlation between the image and document keyword of each pair. Finally, the importance of each of the plurality of images is determining according to an image metric that combines the proximity factors for each document keyword and image pair. Thus, the goal of Applicant's invention is to determine the importance of each of the plurality of document images, each of the images having a location in the document.

The other two prior art references cited by the Examiner are Shiiyama et al. (hereinafter "Shiiyama") and Rosenbaum. Shiiyama teaches a generating a correlation between a keyword and an image, but does not teach that the keywords are document keywords or that the images are document images contained in the same document as the keywords. Rosenbaum teaches a mixed object document which may contain both text and non-text objects such as image objects, but does not contain any teachings of correlating keywords and images within the document. In light of the functional and utility differences between Ho and Applicant's claimed invention, the Examiner believes that Applicant's claimed invention is novel and would not have been obvious to one of ordinary skill in the art at the time of the invention.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter J Smith whose telephone number is 571-272-4101. The examiner can normally be reached on Mondays-Fridays 7:00am-3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph H Feild can be reached on 571-272-4090. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PJS
1/14/2005


JOSEPH FEILD
SUPERVISORY PATENT EXAMINER